

Market Price Monitor

Local Equity Markets

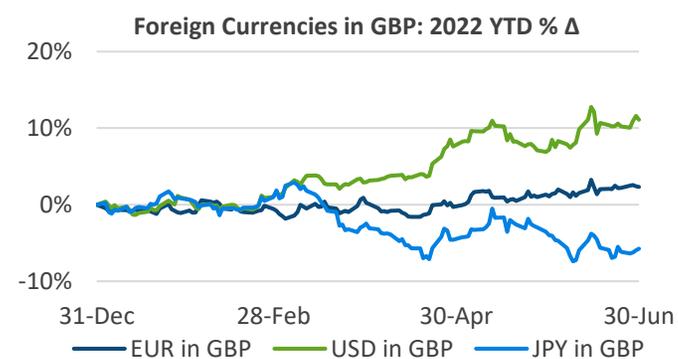
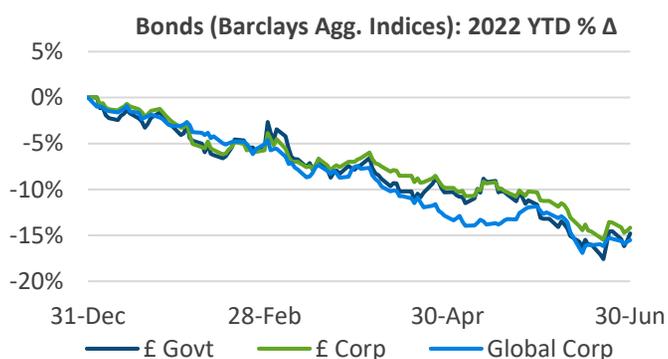
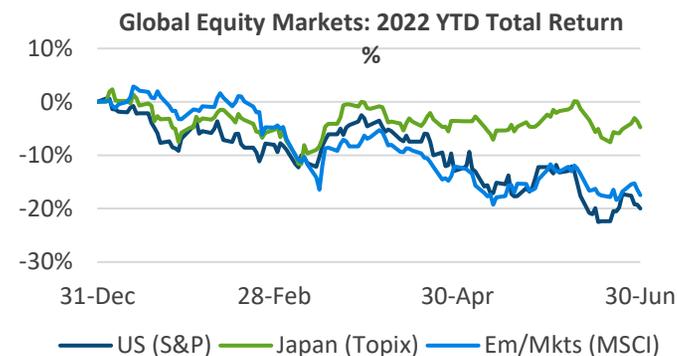
- Global equity markets ended the second quarter with material losses, as recession fears and continued expectation of further significant rate hikes to combat inflation continued to dampen investor's appetite for risk assets.
- The FTSE 100 ended the month down 5.5%. However, the index continues to be the outperformer globally, being only down 1.0% year-to-date.
- The Euro Stoxx 50 index lost 8.7% in June.

Global Equity Markets

- The S&P 500 was down 8.3% at month-end, extending its losses to 20.0% year-to-date.
- The Japanese Topix fell by 2.1% and the MSCI Emerging Markets index dropped by 6.6%.

Bond/FX Markets

- Bond markets also had a poor month, with the British government bond index down 2.0% in June, and 14.8% year-to-date.
- The British and global corporate bond indices lost 3.4% and 3.6%, respectively.
- The Pound had a mixed performance in June, losing 3.6% and 1.2% against the US Dollar and the Euro, respectively. Meanwhile, it gained 1.8% against the Japanese Yen.



Total Returns as of June 30, 2022

	FTSE 100	FTSE All Share	Euro Stoxx 50	US (S&P)	Japan (Topix)	Em/Mkts (MSCI)	£ Govt	£ Corp	Global Corp	EUR in GBP	USD in GBP	JPY in GBP
1 Month	-5.5%	-6.0%	-8.7%	-8.3%	-2.1%	-6.6%	-2.0%	-3.4%	-3.6%	1.2%	3.6%	-1.8%
3 Month	-3.7%	-5.0%	-9.4%	-16.1%	-3.7%	-11.3%	-7.8%	-8.0%	-8.7%	2.1%	7.9%	-3.3%
1 Year	5.8%	1.6%	-12.1%	-10.6%	-1.4%	-25.0%	-14.3%	-14.6%	-16.5%	0.3%	13.3%	-7.2%
YTD	-1.0%	-4.6%	-17.4%	-20.0%	-4.8%	-17.5%	-14.8%	-14.2%	-15.5%	2.3%	11.1%	-5.7%

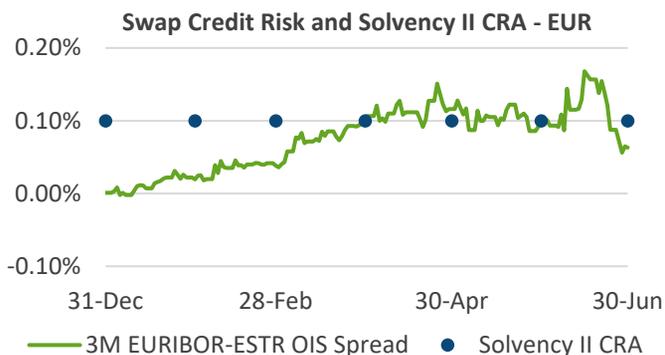
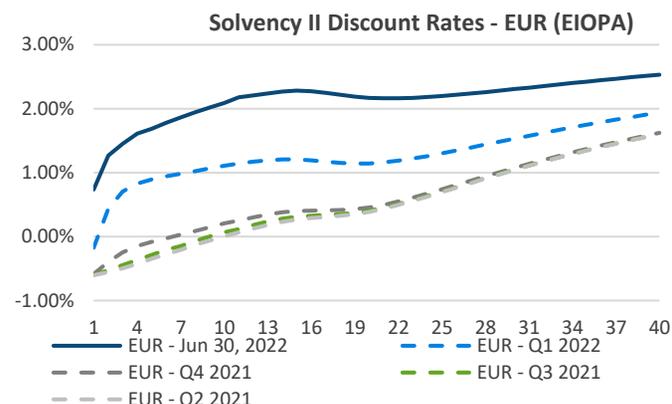
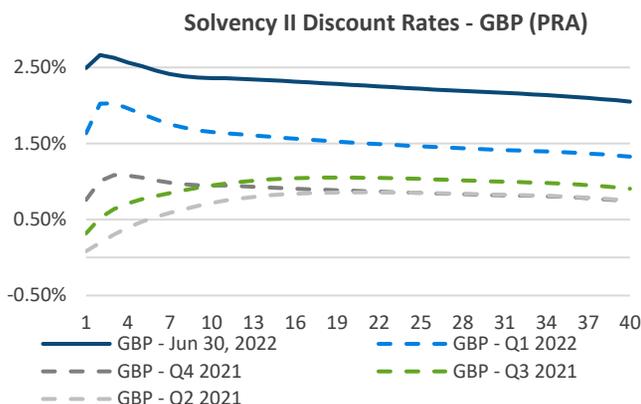
Solvency II Monitor - Rates

Risk Free Rates

- Both GBP and EUR risk-free rates rose at all terms for the fifth consecutive month.
- The 1-year risk-free rate saw the biggest increase for both GBP and EUR, rising by 45 basis points for the former and 35 basis points for the latter.
- The 5-year and 10-year GBP risk-free rates climbed by 24 and 21 basis points, respectively.
- The 10 and 20-year EUR risk-free rates increased by 32 and 31 basis points, respectively.

Credit Risk Adjustment

- The EUR CRA was unchanged and remains floored at 10 basis points.



	Change in GBP Discount (bps)				
	1Y	Y5	Y10	Y20	Y30
Since Q1 2022	86	63	71	76	75
Since Q4 2021	173	147	141	139	135
Since Q3 2021	217	175	141	122	117
Since Q2 2021	241	205	164	142	135

	Change in EUR Discount and CRA (bps)					
	1Y	Y5	Y10	Y20	Y30	CRA
Since Q1 2022	91	79	98	103	77	0
Since Q4 2021	132	177	188	171	123	0
Since Q3 2021	133	197	202	176	126	0
Since Q2 2021	134	203	209	178	127	0

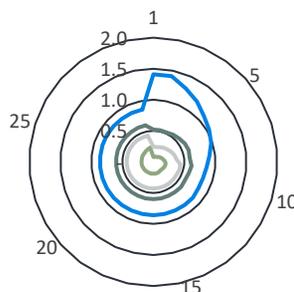
Solvency II Monitor - Spreads

Fundamental Spreads

- There were no material changes since the last report.

Fundamental Spreads %

GBP - Financial

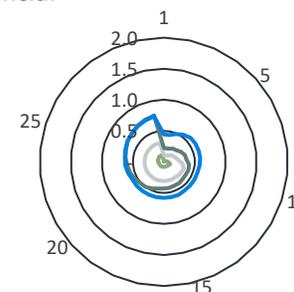


— AAA — AA — A — BBB

GBP Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.08	0.12	0.20	0.19	0.23
AA	0.24	0.30	0.44	0.43	0.43
A	0.52	0.56	0.60	0.60	0.60
BBB	1.41	1.10	0.84	0.86	0.86

GBP Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.04	0.08	0.15	0.23
AA	0.04	0.07	0.11	0.18	0.26
A	0.06	0.12	0.19	0.32	0.42
BBB	0.15	0.25	0.34	0.48	0.59

GBP - Non-Financial



— AAA — AA — A — BBB

GBP Non-Financial Fundamental Spread %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.11	0.08	0.12
AA	0.11	0.16	0.34	0.31	0.31
A	0.22	0.28	0.42	0.51	0.76
BBB	0.44	0.58	0.57	0.58	0.75

GBP Non-Financial 'Before Floor' %					
	1Y	Y5	Y10	Y20	Y30
AAA	0.00	0.01	0.04	0.07	0.12
AA	0.00	0.04	0.09	0.18	0.26
A	0.04	0.15	0.27	0.51	0.76
BBB	0.11	0.22	0.34	0.56	0.75

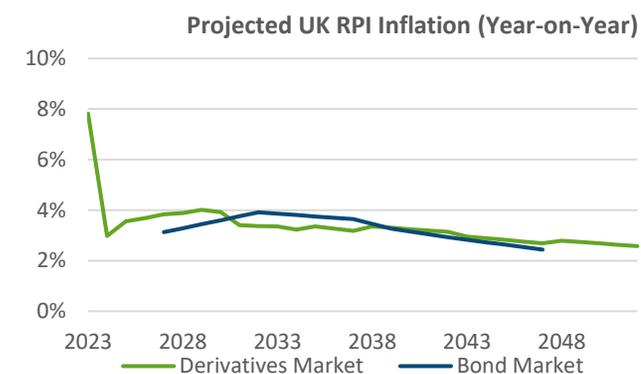
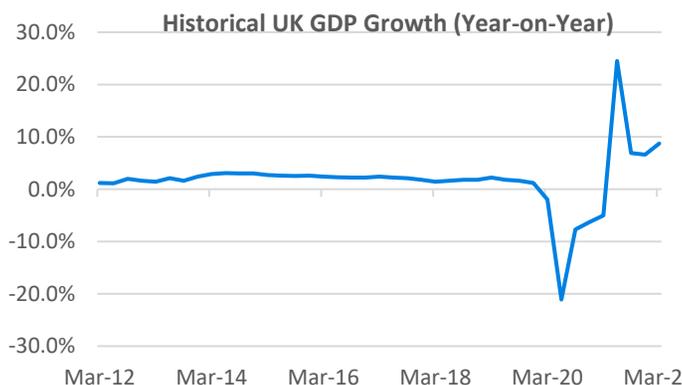
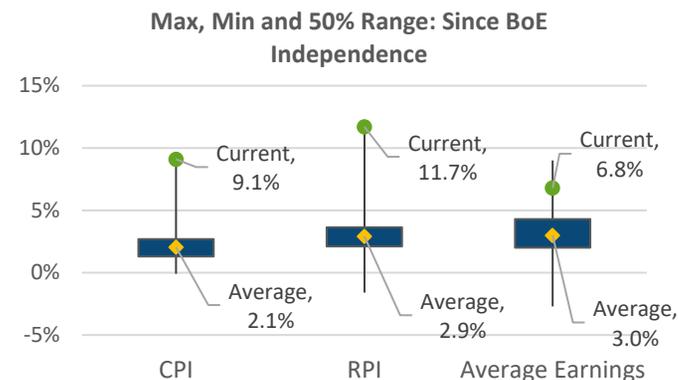
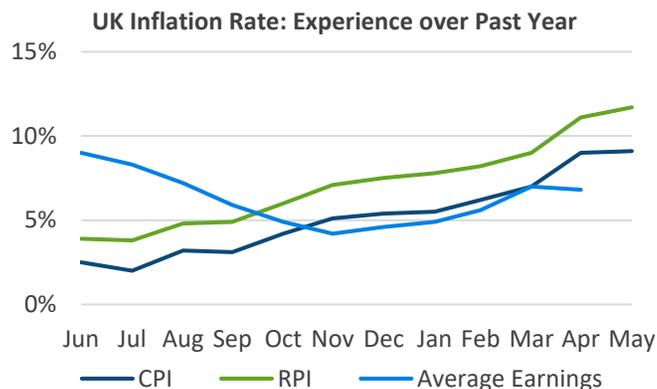
The **Solvency II risk-free discount rates** are based on applying the Smith-Wilson Extrapolation to LIBOR swap rates sourced from Refinitiv and applying the Credit Risk Adjustment as defined in the Technical Specs. The data is provided by EIOPA for EUR, and by PRA for GBP, as of 30/06/22.

The **Credit Risk Adjustment** is a component of the risk-free discount curve defined by EIOPA. It is calculated from actual experience in the 'LIBOR-OIS' spread (3 months for EUR), and is bounded between 0.10 and 0.35. We show actual LIBOR-OIS spread levels and the defined CRA, for EUR.

EIOPA fundamental spreads show the credit spread corresponding to the risk of default or downgrading of an asset. This is shown here across financial and non-financial assets, credit quality steps 0-3 and durations of 1-30 years. The data is provided by EIOPA and as of 30/06/22. **Fundamental spread** = maximum (probability of default + cost of downgrade; 35% of long-term average spread). In the tables we show the **'before floor'** measure = probability of default + cost of downgrade.

UK Inflation Monitor

- UK's CPI hit another multi-decade high in May, increasing by 10 basis points to 9.1%.
- UK's RPI inflation rose by 60 basis points to 11.7%.
- According to the ONS: *"Rising prices for food and non-alcoholic beverages, compared with falls a year ago, resulted in the largest upward contribution to the change. The largest offsetting downward contributions to change in the rates were from recreation and culture and clothing and footwear."*
- Average earnings fell by 20 basis points to 6.8% in April.
- According to the ONS: *"strong bonus payments have kept recent real total pay growth positive. Previous months' strong growth rates were affected upwards by base and compositional effects. These initial temporary factors have worked their way out. However, we are now comparing the latest period with a period where certain sectors had increasing numbers of employees on furlough because of the winter 2020 to 2021 lockdown. Therefore, a small amount of base effect will be present for these sectors."*
- The projected RPI curve was lower at the very short-end in comparison to the previous month, whilst the rest of the curve was relatively unchanged.



Historical year-on-year inflation rate is assessed by the % change on:

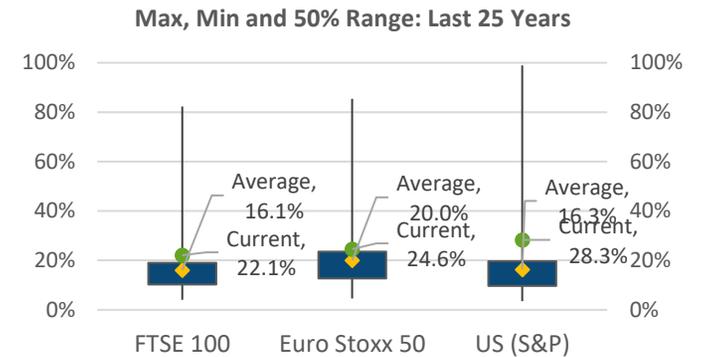
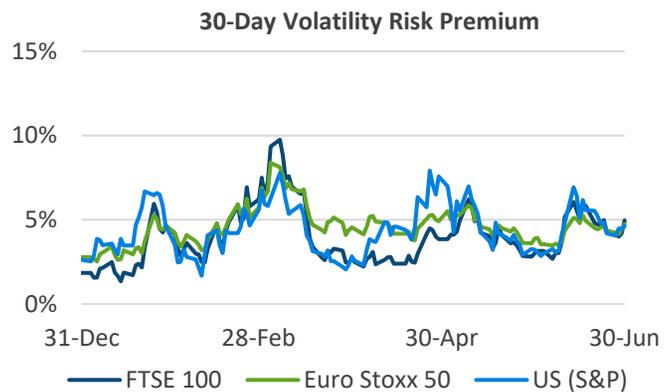
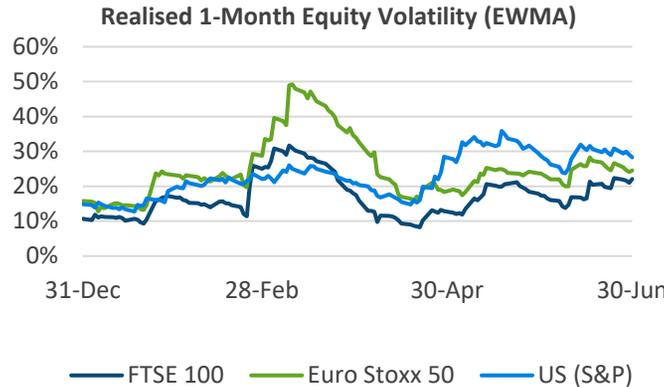
- **Consumer Price Index (CPI)** – measuring the monthly price of a basket of consumer goods and services
- **Retail Price Index (RPI)** – similar to CPI, but the main difference due the addition of mortgage payments, council tax and other housing costs
- **Average Earnings** – measuring the average total weekly employee remuneration over the previous 3 months.

Projection year-on-year inflation rate is the forward rate calculated from market data:

- **Derivatives Market View** – constructed from zero coupon inflation par swap rates against the RPI index at various tenors
- **Bond Market View** – constructed from the difference between the nominal rates implied by the conventional gilts and the real rates implied by the index-linked (RPI) gilts.

Volatility and Hedging Cost Monitor

- Realised Volatility on major equity indices increased in June. The FTSE 100 ended the month with a realised volatility of 22.1%. The same measure stood at 24.6% and 28.3% on the Euro Stoxx 50 and the S&P 500.
- Volatility risk premiums rose during the month. The volatility risk premium on the FTSE 100 was 4.0% at month-end. The Euro Stoxx 50 and the S&P 500 had a volatility risk premium of 4.2% and 4.5% at month-end, respectively. **** Please note that due to some missing data the volatility risk premiums have only been updated to the 28th of June for this month. ****



Actual realised equity volatility is measured by the weighted standard deviation of 1 month daily index change. The Exponentially Weighted Moving Average (EWMA) methodology places more importance to the recent returns in the calculation of the volatility.

Volatility Risk Premium is estimated as the difference between 30-day implied volatility and projected realised volatility (on data from the Oxford-Man Institute). This reflects the additional cost of hedging from purchasing a basket of options, in comparison to managing a dynamic delta hedge with futures (ignoring rolling transaction costs).

Expected realised volatility is an intermediate result from the [Milliman Guarantee Index™ \(MGI\)](#), which provides volatility parameters for variable annuity guarantee (VA) valuation and risk management. The levels shown are on an expected basis, and do not reflect any risk adjustment.

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